JBLM PFAS PA/SI

Technical Project Planning Meeting #4
November 27, 2018

Agenda

TPP Team Members Introductions

Overview

Meeting Objectives

Project Approach Review – Where Are We?

Source Area Identification Results

Phase 1 Sampling Results

Proposed Phase 2 Sampling Locations

Next steps

Current Schedule

Technical Project Team

U.S. EPA Region X

Chris Cora – Project Manager

Ted Repasky – Hydrogeologist

Washington State Department of Ecology

Chuck Hoffman – Project Manager

Washington Department of Public Health

Steve Hulsman

Cheryl Howe

AECOM

Anthony Palmieri – Deputy, Project Manager/Geologist

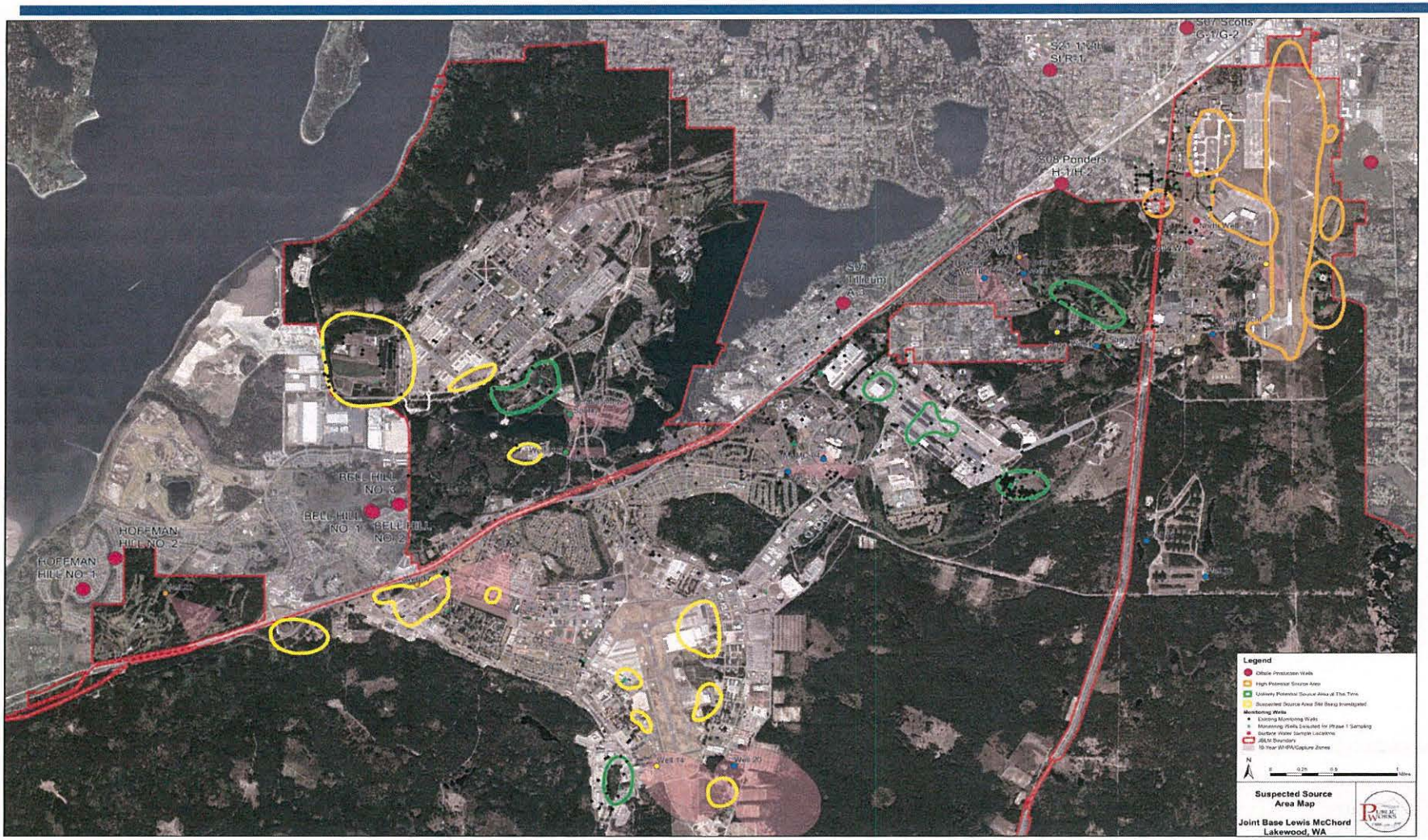
Rosa Gwinn – Lead Verifier and Oversight

Greg Burgess – Project Manager

Meeting Objectives

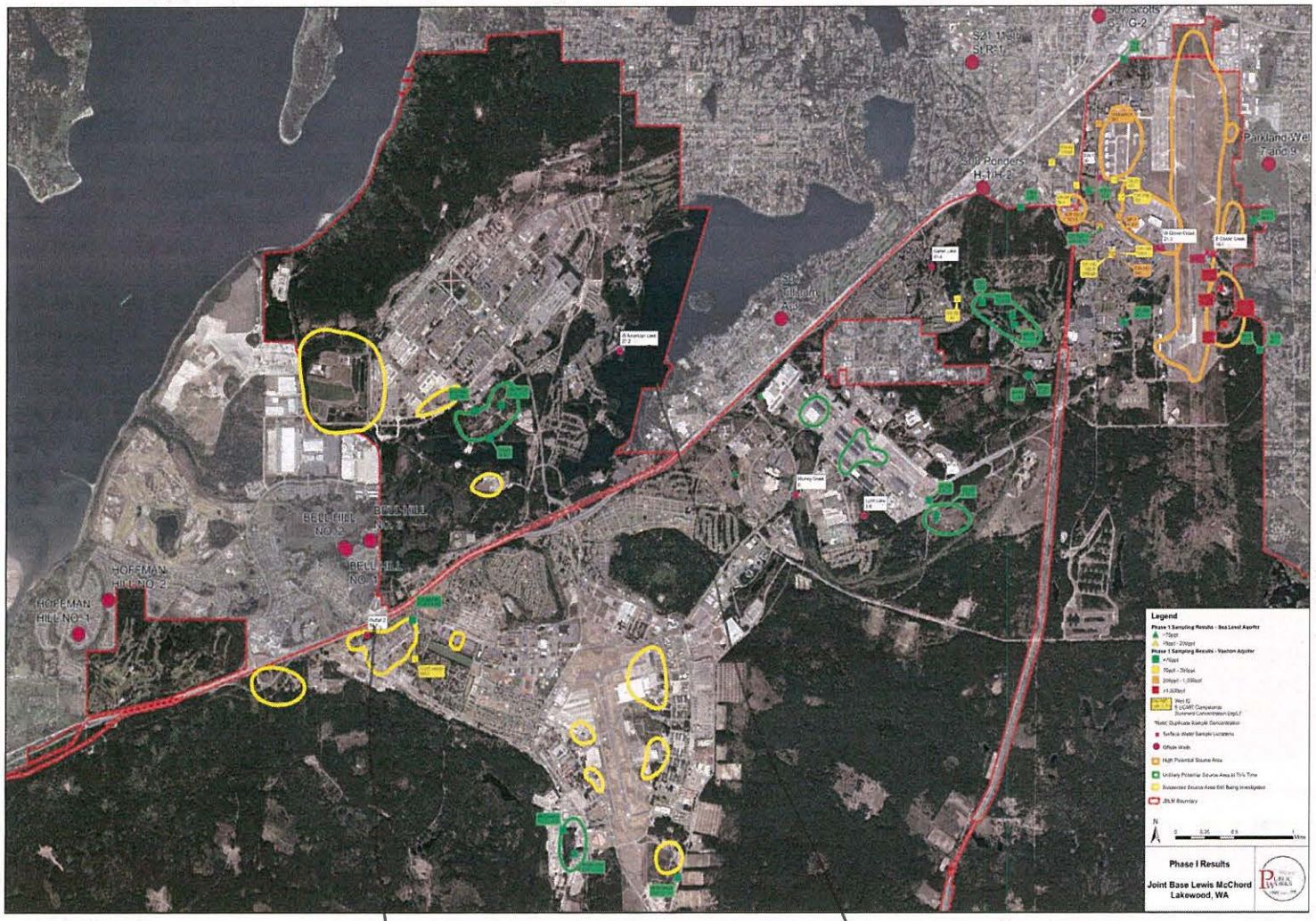
1. Where are we in the project approach
2. Review identified potential sources
3. Review Phase 1 sampling results
4. Discuss/Select proposed Phase 2 sampling locations
5. Review next steps

PA Potential Source Areas



Potential source areas identified in McChord Air Field Area
Potential source areas in former Lewis Main and former North Fort need evaluation
Phase 1 data indicate ALGT-LF 5, LF 1, LF 2, and LF 4 are not potential source areas

Preliminary Phase 1 Sampling Results Overview



Phase 1 Results
Sum of six UCMR-3 PFAS compounds from GW monitoring wells

Detections greater than 70 ppt for sum of six UCMR-3 PFAS compounds are in the McChord Area

One in American Lake Garden Tract

One location adjacent to Dupont Gate near well 17

Results in nanograms per liter (ng/L) or parts per trillion (ppt)

Surface water 50-90 ppt 6 compounds
2 compounds

Surface water 220 ppt

Proposed Phase 2 Source Area Sampling Locations

North McChord Field

Figure 17-16
Phase II Sampling Locations
North McChord Runway and Hangar Source Areas
PFAS Site Inspection
Joint Base Lewis McChord
Lakewood, WA

Location ID	Screen Interval (ft bgs) and Aquifer	Rationale	Nearest Potential Area of Concern	Nearest Drinking Water Production Well
2018-LT-12	40-50 (A-Vashon)	Assess for the presence of PFAS in shallow groundwater at the north end of McChord Field	North McChord Hangars and Runways	North Well
2019-LT-13	180-200 (C-Sea Level?)	Assess for the presence of PFAS in deep groundwater	North McChord Hangars and Runways	Scotts Well
2019-LT-14	180-200 (C-Sea Level)	Assess for the presence of PFAS in deep groundwater	North McChord Hangars and Runways	Scotts Well

Approximate groundwater flow direction Sea Level Aquifer, USGS 2005 and 2010

Approximate groundwater flow direction Vashon Aquifer, USGS 2010

*** Existing monitoring well**

Proposed Phase 2 Source Area Sampling Locations

McChord Hangars/Clover Creek

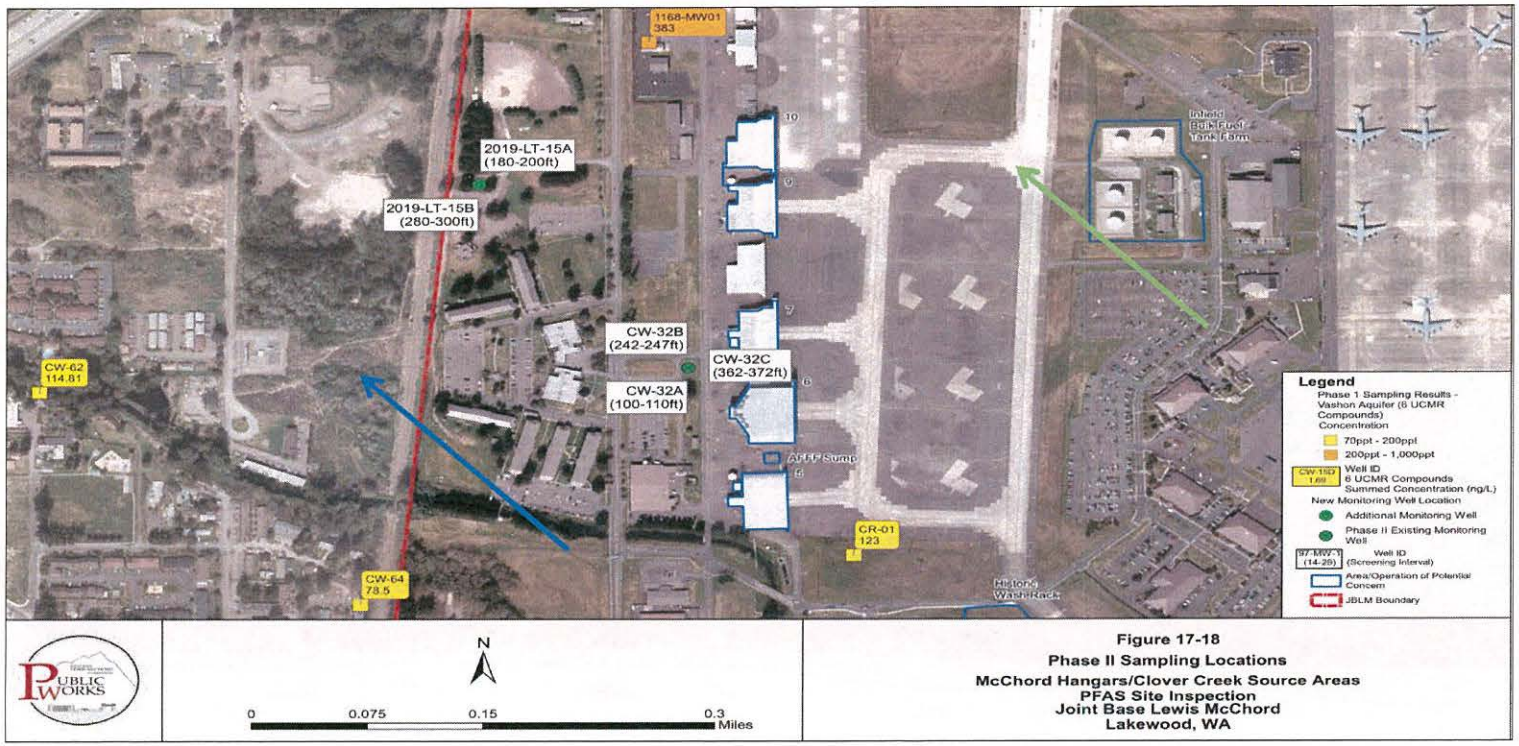


Figure 17-18
Phase II Sampling Locations
McChord Hangars/Clover Creek Source Areas
PFAS Site Inspection
Joint Base Lewis McChord
Lakewood, WA

Location ID	Screen Interval (ft bgs) and Aquifer	Rationale	Nearest Potential Area of Concern	Nearest Drinking Water Production Well
CW-32A*	100-110 (A-Vashon)	Assess for the presence of PFAS in shallow groundwater	Clover Creek and McChord Hangars	North Well
CW-32B*	242-247 (C-Sea Level)	Assess for the presence of PFAS in deep groundwater	North McChord Hangars and Runways	North Well
CW-32C*	362-372 (E-Stuck)	Assess for the presence of PFAS in deep groundwater	McChord Hangars, Runways and Clover Creek	North Well
2019-LT-15A	185-205 (C-Sea Level)	Assess for the presence of PFAS in deep groundwater	North McChord Hangars and Runways	North Well
2019-LT-15B	280-300 (C-Sea Level)	Assess for the presence of PFAS in deep groundwater	North McChord Hangars and Runways	North Well

Approximate groundwater flow direction Sea Level Aquifer, USGS 2005 and 2010

Approximate groundwater flow direction Vashon Aquifer, USGS 2010

*** Existing well**

Proposed Phase 2 Source Area Sampling Locations

McChord Field /FTA-033

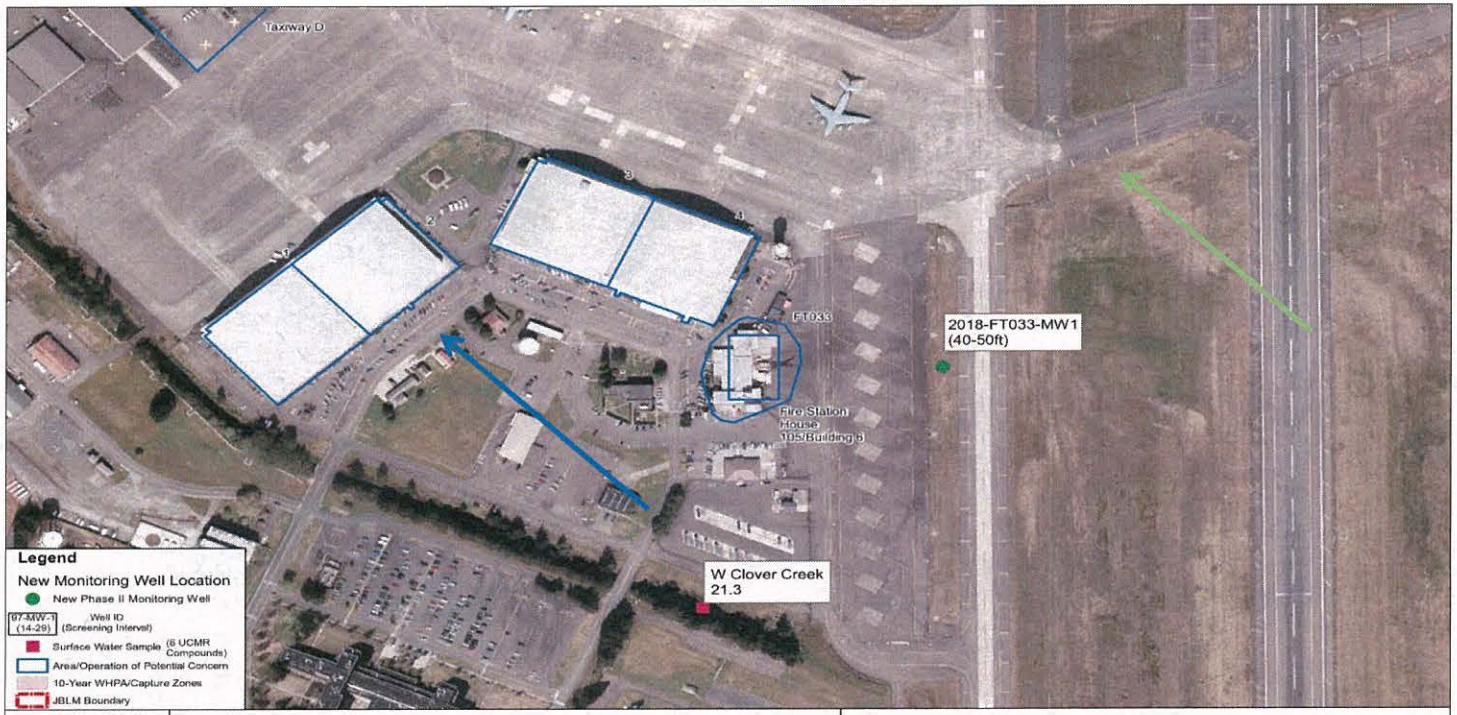


Figure 17-19
Phase II Sampling Locations
FTA-033/McChord Hangars Source Areas
PFAS Site Inspection
Joint Base Lewis McChord
Lakewood, WA

Location ID	Screen Interval (ft bgs) and Aquifer	Rationale	Nearest Potential Area of Concern	Nearest Drinking Water Production Well
2018-FT033-MW1	40-50 (A-Vashon)	Assess for the presence of PFAS in shallow groundwater adjacent to FT033, McChord Field	FT033, McChord Hangars and Runways	North Well

Approximate groundwater flow direction Sea Level Aquifer, USGS 2005 and 2010

Approximate groundwater flow direction Vashon Aquifer, USGS 2010

Proposed Phase 2 Source Area Sampling Locations

North Gray Field Hangars/FTLE-17

Figure 17-21
Phase II Sampling Locations
North Gray Field Hangars/FTLE-17 Source Areas
PFAS Site Inspection
Joint Base Lewis McChord
Lakewood, WA

Location ID	Screen Interval (ft bgs) and Aquifer	Rationale	Nearest Potential Area of Concern	Nearest Drinking Water Production Well
97-MW-1*	14-29 (A-Vashon)	Assess for the presence of PFAS in shallow groundwater	Gray Field Hangars	Well 14 and Well 20
2018-03106-MW1	40-50 (A-Vashon)	Assess for the presence of PFAS in shallow groundwater adjacent to Gray Field ANG hangar	Gray Field Hangars and Runways	Well 14 and Well 20
2018-FTLE17-MW1	40-50 (A-Vashon)	Assess for the presence of PFAS in shallow groundwater within former fire training area FTLE-17	Gray Field Hangars and Runways, and FTLE-17	Well 14

Approximate groundwater flow direction Sea Level Aquifer, USGS 2005 and 2010

Approximate groundwater flow direction Vashon Aquifer, USGS 2010

*** Existing well**

Proposed Phase 2 Source Area Sampling Locations

Gray Field Hangars Source Areas

Figure 17-23
Phase II Sampling Locations
Gray Field Hangars Source Areas
PFAS Site Inspection
Joint Base Lewis McChord
Lakewood, WA

Location ID	Screen Interval (ft bgs) and Aquifer	Rationale	Nearest Potential Area of Concern	Nearest Drinking Water Production Well
JP-MW-03*	40-50 (A-Vashon)	Assess for the presence of PFAS in shallow groundwater downgradient of Gray Field	Gray Field Hangars	Well 17
03075-MW02*	20-35 (A-Vashon)	Assess for the presence of PFAS in shallow groundwater downgradient of Gray Field	Gray Field Hangars	Well 17

Approximate groundwater flow direction Sea Level Aquifer, USGS 2005 and 2010

Approximate groundwater flow direction Vashon Aquifer, USGS 2010

*** Existing well**

Proposed Phase 2 Source Area Sampling Locations

Historical Waterproofing/Laundry/Landfill 9 Source Areas

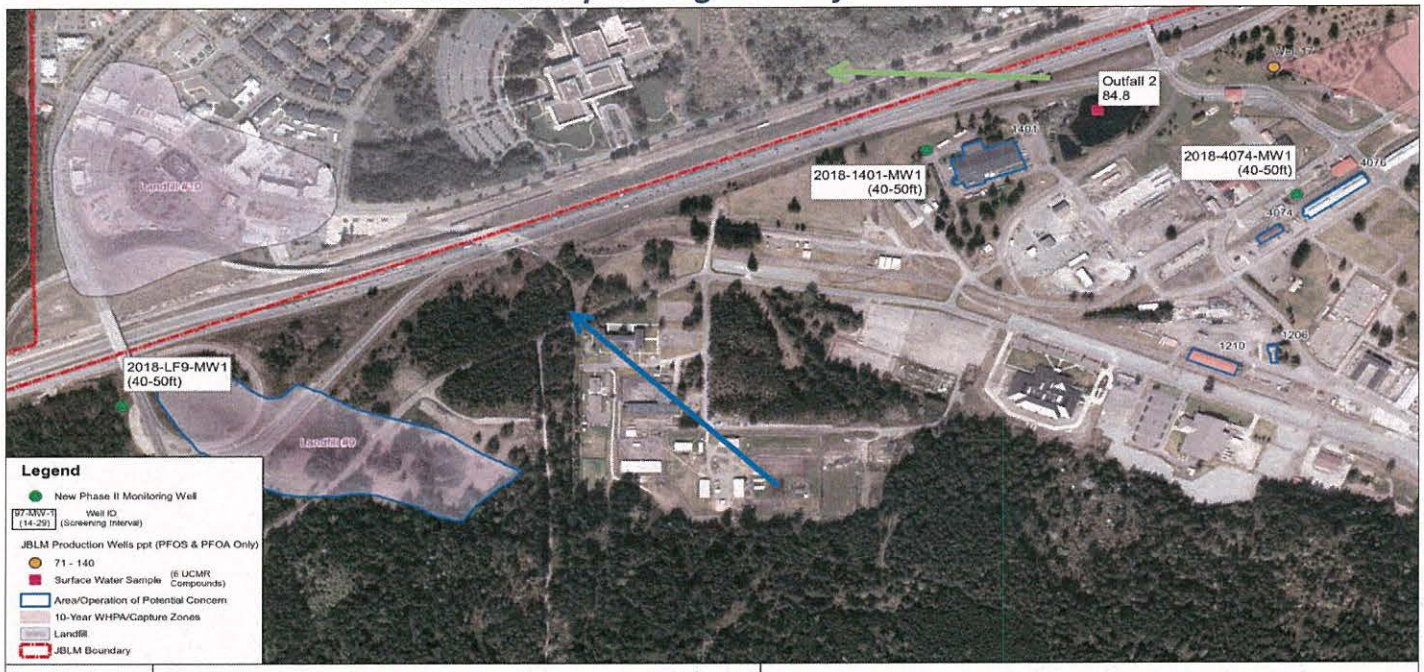


Figure 17-25
Phase II Sampling Locations
Historical Water-proofing/Laundry/Landfill 9 Source Areas
PFAS Site Inspection
Joint Base Lewis McChord
Lakewood, WA

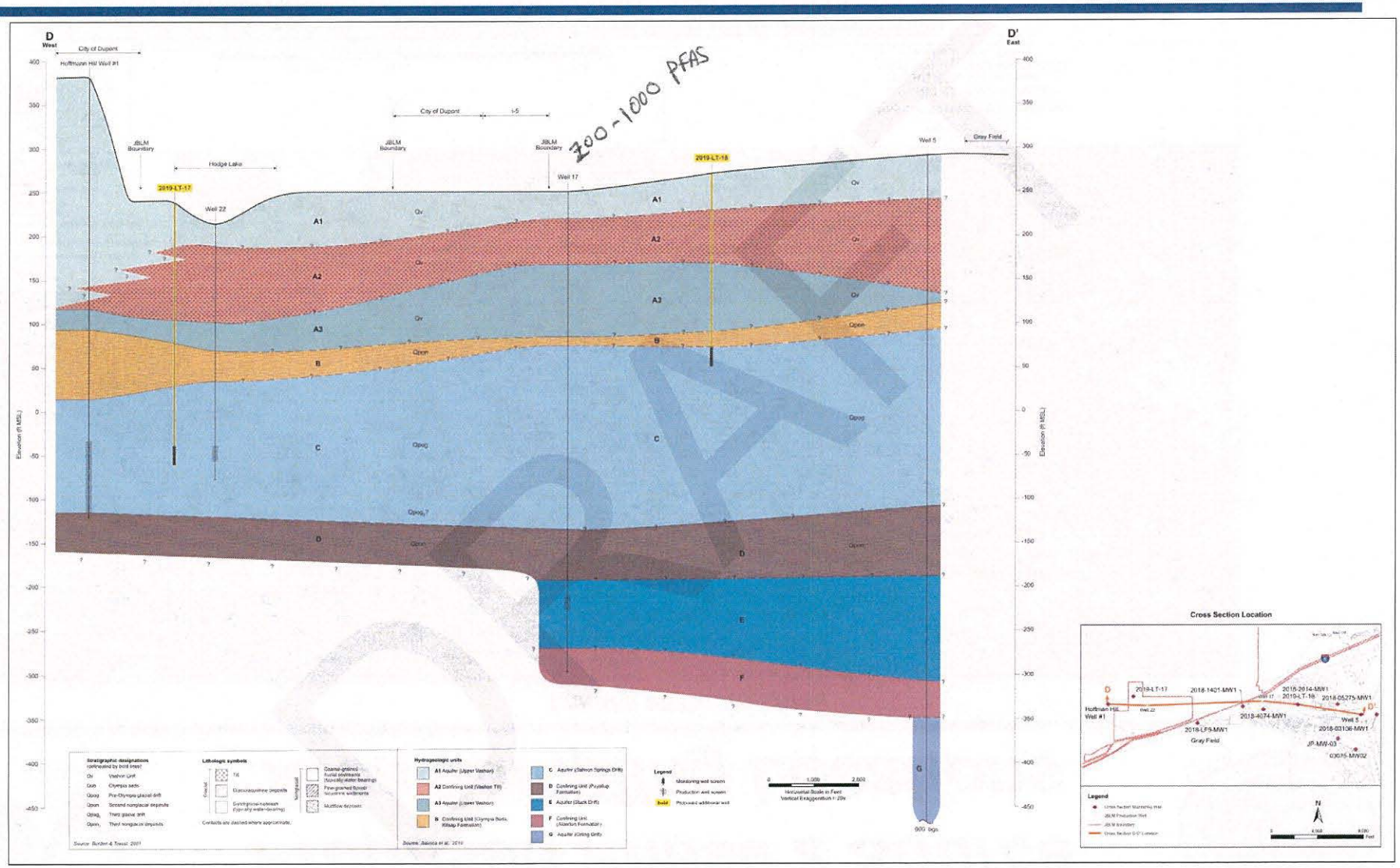
Location ID	Screen Interval (ft bgs) and Aquifer	Rationale	Nearest Potential Area of Concern	Nearest Drinking Water Production Well
2018-4074-MW1	40-50 (A-Vashon)	Assess for the presence of PFAS in shallow groundwater adjacent to historical water proofing facility	Historical Water Proofing and Laundry Facilities	Well 17
2018-1401-MW1	40-50 (A-Vashon)	Assess for the presence of PFAS in shallow groundwater adjacent to historical laundry facility	Historical Water Proofing and Laundry Facilities	Well 17
2018-LF9-MW1	40-50 (A-Vashon)	Assess for the presence of PFAS in shallow groundwater near Landfill #9	Landfill #9	Well 22

Approximate groundwater flow direction Sea Level Aquifer, USGS 2005 and 2010

Approximate groundwater flow direction Vashon Aquifer, USGS 2010

*** Existing well**

Proposed Phase 2 Source Area Sampling Locations



Proposed Phase 2 Source Area Sampling Locations

Landfill #4/Gray Field Source Areas

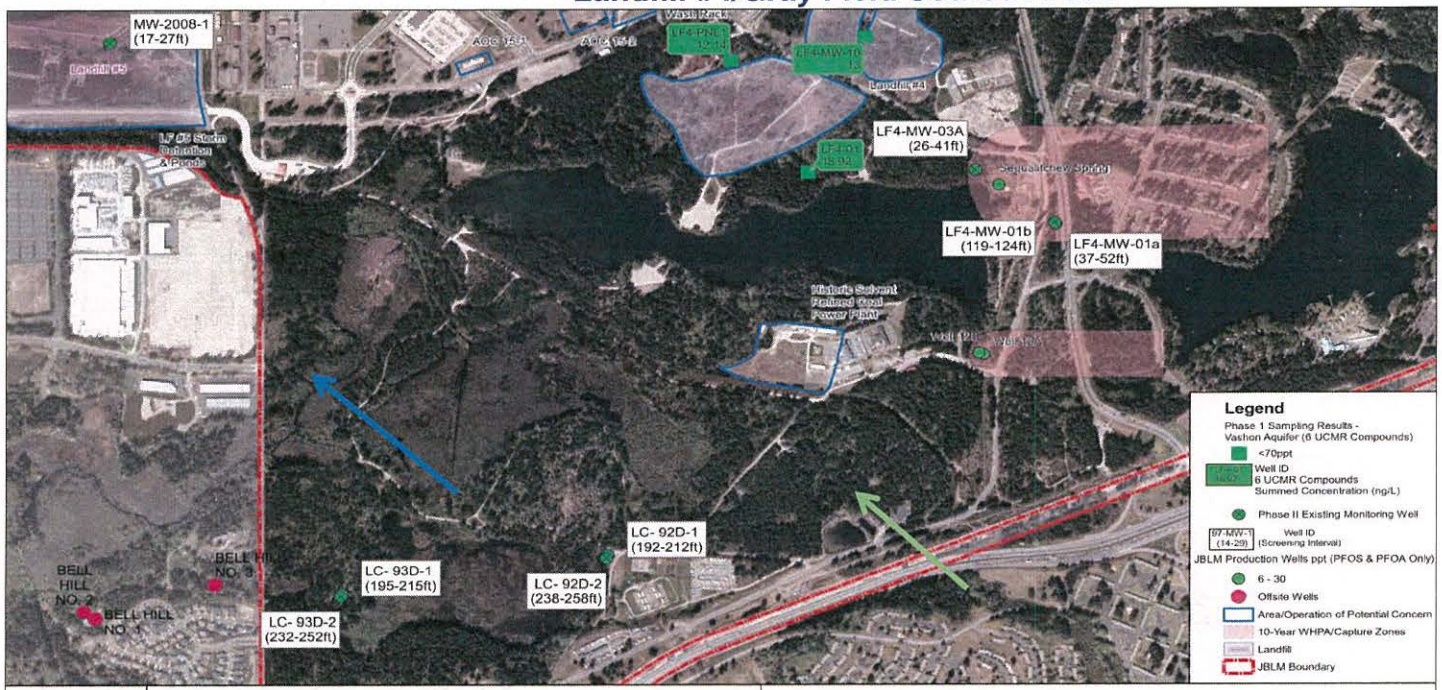


Figure 17-28
Phase II Sampling Locations
Landfill #4 Source Area
PFAS Site Inspection
Joint Base Lewis McChord
Lakewood, WA

Location ID	Screen Interval (ft bgs) and Aquifer	Rationale	Nearest Potential AOC	Nearest Drinking Water Production Well
LF4-MW-03A*	26-41 (A-Vashon)	Assess for the presence of PFAS in shallow groundwater adjacent to Landfill #4, in the vicinity of Sequalitchew Springs and Well 12B.	Landfill #4	Sequalitchew Springs
LF4-MW-01A+	37-52 (A-Vashon)		Landfill #4	Sequalitchew Springs
LF4-MW-01B+	119-124 (A- Vashon)		Landfill #4	Sequalitchew Springs
LC- 92D-1+	192-212 (C-Sea Level)	Assess for the presence of PFAS in deep groundwater adjacent to Landfill #4 and downgradient of Gray Field	Landfill#4 and Gray Field	Bell Hill #3
LC- 92D-2+	238-258 (C-Sea Level)		Landfill#4 and Gray Field	Bell Hill #3
LC- 93D-1+	195-215 (C-Sea Level)		Landfill#4 and Gray Field	Bell Hill #3
LC- 93D-2+	232-252 (C-Sea Level)		Landfill#4 and Gray Field	Bell Hill #3

Approximate groundwater flow direction Sea Level Aquifer, USGS 2005 and 2010

Approximate groundwater flow direction Vashon Aquifer, USGS 2010

*** Existing well**

+ Tentative

Current Schedule

- December 2018 to March 2019 – Phase II and Additional well installation and sampling
- June 2019 – TPP #5 Field Investigation data review
- September 2019 – Final SI Report